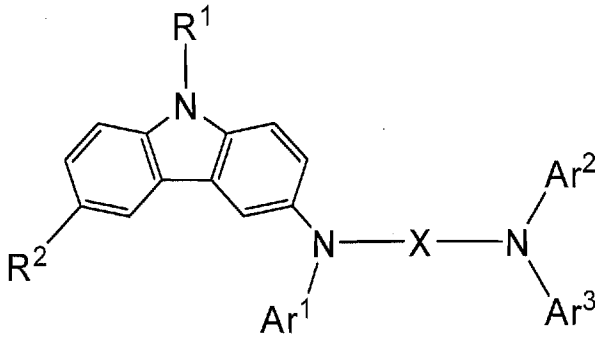
6,541,129 to Kawamura. The Applicant respectfully traverses the rejection because the Official Action has not made a *prima facie* case of obviousness.

As stated in MPEP §§ 2142-2144.04, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some reason, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some reason to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The prior art, either alone or in combination, does not teach or suggest all the features of the independent claims. Independent claims 1-3 recite a carbazole derivative represented by a general formula (1) (shown below),



(1)

wherein R^1 represents any one of hydrogen, an alkyl group having 1 to 6 carbon atoms, an aryl group having 6 to 25 carbon atoms, a heteroaryl group having 5 to 9

carbon atoms, an arylalkyl group and an acyl group having 1 to 7 carbon atoms. Similar subject matter is recited in independent claims 7-9, 13-15 and 19-21, with respect to a carbazole derivative represented by general formulae (3), (5) and (103), respectively. For the reasons provided below, Kitahora, Aoki, Matsumoto and Kawamura, either alone or in combination, do not teach or suggest the above-referenced features of the present invention.

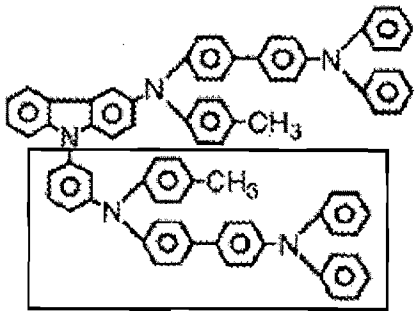
The Official Action asserts that Kitahora "discloses an amino compound ... where one such example compound is disclosed [reproduced and annotated below]: ((19), page 7 such that R^1 = aryl group having 25 carbon atoms (substituted phenyl group), Ar^1 = aryl group having 7 carbon atoms (substituted phenyl group, Ar^2 = Ar^3 = aryl group having 6 carbon atoms ..." (page 3, Paper No. 20100916). The Applicant respectfully disagrees and traverses the assertions of the Official Action.

In response to the Applicant's arguments that compound 19 of Kitahora, on which the Official Action expressly relies, only potentially teaches that an alleged R^1 has 37 carbon atoms, not 18 or 25 as the Official Action asserts, the Advisory Action asserts "[i]t is the position of the Examiner that the claim can be interpreted to mean that for compound 19, the aryl group refers only to the phenyl group (aryl group having 6 carbon atoms) that is substituted with a amine group N(aryl)2 where N(aryl)2 is not an aryl group" (page 2, Paper No. 20101231). The Applicant respectfully disagrees and traverses the assertions of the Official Action and of the Advisory Action.

The manner in which the Examiner interprets compound 19 of Kitahora is beside the point that the alleged R^1, however it is interpreted, does not satisfy the limitations of the claimed invention. Specifically, even if the Examiner's position were, *arguendo*, accepted, "the phenyl group (aryl group having 6 carbon atoms) that is substituted with a amine group N(aryl)2 where N(aryl)2 is not an aryl group" is further substituted in an arrangement that does correspond to "any one of hydrogen, an alkyl group having 1 to 6 carbon atoms, an aryl group having 6 to 25 carbon atoms, a heteroaryl group having 5

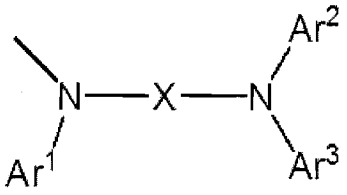
to 9 carbon atoms, an arylalkyl group and an acyl group having 1 to 7 carbon atoms," as required by the claims of the present invention.

In other words, one of ordinary skill in the art would readily appreciate that in compound 19 of Kitahora [annotated at right], the substituent group that the Official Action appears to correspond with R^1 is the group enclosed by the rectangle annotation. The group comprises 37 carbon atoms, no matter how the group is partitioned or interpreted. Furthermore, to the extent that the Official Action appears to assert an arrangement or interpretation that excludes 19 expressly disclosed carbon atoms from the asserted compound, the Applicant respectfully submits that there is no teaching or suggestion in the prior art or in the general knowledge of the art to interpret the disclosed compound in such a manner. Accordingly, Kitahora does not teach a compound wherein R^1 represents any one of hydrogen, an alkyl group having 1 to 6 carbon atoms, an aryl group having 6 to 25 carbon atoms, a heteroaryl group having 5 to 9 carbon atoms, an arylalkyl group and an acyl group having 1 to 7 carbon atoms.



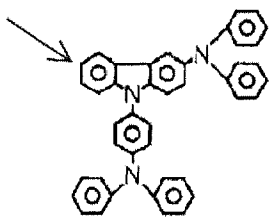
Furthermore, in response to the Applicant's argument that there is no motivation to modify compound 19 of Kitahora to allegedly produce a compound having Ar3 = Ar4 = Ar5 = phenyl to have a total of 18 carbon atoms, the Advisory Action responds that "[i]t is the position of the Examiner that one of ordinary skill in the art at the time of the invention can be motivated to modify compound 19 such that Ar^3 = Ar^4 = Ar^5 = phenyl identical/similar to the substituents shown in compounds 1-3 in the course of experimentation in order to tune to charge-transporting properties of the material for which it is used" (Id.). The Applicant respectfully disagrees and traverses the assertions of the Advisory Action.

Based on the Examiner's interpretation that $Ar^3 = Ar^4 = Ar^5$ = phenyl, in view of some combination of compounds 1-3 and 19, the resulting combination must still include a structure corresponding to:

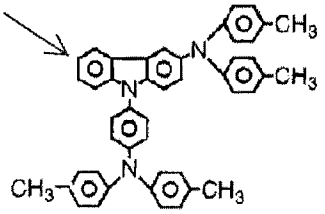


... at the structural position indicated by arrows in the following annotated compounds 1-3 and 19 of Kitahora.

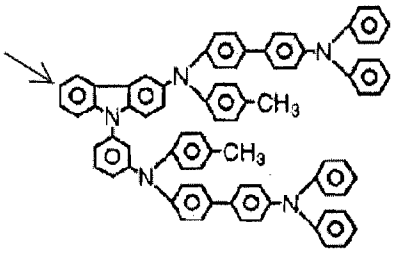
(1)



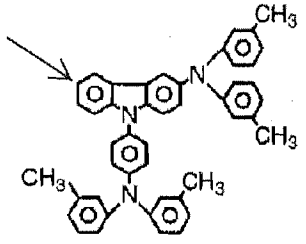
(2)



(19)



(3)



To the contrary, the asserted compounds can only potentially be interpreted so broadly as to include a substituted hydrogen atom at such positions. However, hydrogen cannot reasonably be said to correspond to the above-mentioned structure and the asserted compounds fail to suggest the claimed carbazole derivative for this

additional reason. That is, even if the claimed compounds were combined or modified in the exact manner suggested by the Official Action, the asserted combination would nonetheless lack the above-mentioned structure and fail to teach every element of the claimed derivative. Therefore, the Official Action has not set forth a *prima facie* case of obviousness. Similarly, with respect to claims 7-11, 13-17 and 25-27, the asserted compounds do not correspond with the claimed carbazole derivatives represented by general formulae (3), (5) and (103). Furthermore, Aoki, Matsumoto and Kawamura do not cure the deficiencies of Kitahora.

Still further, in response to the Advisory Action's above-mentioned assertion that "one of ordinary skill in the art at the time of the invention can be motivated to modify compound 19 such that $Ar^3 = Ar^4 = Ar^5$ = phenyl identical/similar to the substituents shown in compounds 1-3 in the course of experimentation in order to tune to charge-transporting properties of the material for which it is used" (Id.), the Applicant notes that the asserted rationale does not satisfy the well-established standard for obviousness. As noted in MPEP § 2143.01, "The mere fact that references can be combined or modified does not render the resultant combination obvious unless the results would have been predictable to one of ordinary skill in the art" (emphasis in original). KSR International Co. v. Teleflex Inc., 550 U.S. ___, ___, 82 USPQ2d 1385, 1396 (2007). The Official Action appears to assert that the compounds can be modified to tune charge-transporting properties, however this does not explain why one of ordinary skill in the art would have found it obvious or predictable to modify such compounds in the specific manner asserted by the Official Action. Thus, it is respectfully submitted that the standard set forth in the Advisory Action is improper to support a finding of *prima facie* obviousness.

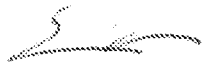
Therefore, the Applicant respectfully submits that Kitahora, Aoki, Matsumoto and Kawamura, either alone or in combination, do not teach or suggest the claimed carbazole derivative and do not adequately explain why it would have been obvious to modify any of compounds 1-3 and 19 of Kitahora.

Since Kitahora, Aoki, Matsumoto and Kawamura do not teach or suggest all the claim limitations and since it would not have been obvious to further modify Kitahora, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

The Commissioner is hereby authorized to charge fees under 37 C.F.R. §§ 1.16, 1.17, 1.20(a), 1.20(b), 1.20(c), and 1.20(d) (except the Issue Fee) which may be required now or hereafter, or credit any overpayment to Deposit Account No. 50-2280.

Respectfully submitted,



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